

TABLE 1.—Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during July 1946—Continued

Standard pressure surface (mb.)		Tampa, Fla. (1,016.8 mb.)			Tatoosh Island, Wash. (1,015.3 mb.)			Toledo, Ohio (994.7 mb.)			Washington, D. C. (1,015.0 mb.)							
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity		
Surface																		
1,000.	31	9	25.5	87	31	31	13.8	87	31	191	20.7	74	31	25	23.2	77		
950.	31	156	25.1	85	31	159	13.4	83	31	143	(*.)	31	31	155	23.2	72		
900.	31	606	22.6	81	31	593	12.8	74	31	594	21.5	60	31	606	21.3	67		
850.	31	1,076	20.0	76	31	1,044	11.2	69	31	1,058	18.5	60	31	1,059	18.3	69		
800.	31	1,568	17.2	73	31	1,519	9.2	64	31	1,546	15.0	61	31	1,557	14.9	66		
750.	31	2,084	14.1	70	31	2,020	6.7	60	31	2,057	11.8	56	31	2,068	12.4	58		
700.	31	2,628	11.1	67	31	2,552	4.3	52	31	2,597	9.3	47	31	2,609	9.8	49		
650.	31	3,201	7.8	63	31	3,106	1.5	48	31	3,164	6.1	47	31	3,178	6.8	47		
600.	31	3,811	4.3	59	31	3,703	-1.6	44	31	3,767	2.8	44	31	3,787	3.4	43		
550.	31	4,456	0.6	62	31	4,332	-5.4	43	31	4,412	-0.5	38	31	4,420	0.0	41		
500.	31	5,119	-3.4	61	31	5,013	-9.2	38	31	5,102	-4.3	30	31	5,121	-4.0	30		
450.	31	5,898	-7.7	59	30	5,737	-13.9	41	31	5,848	-8.8	29	30	5,868	-8.5	29		
400.	31	6,718	-12.7	55	30	6,535	-19.2	30	30	6,665	-13.9	29	30	6,682	-13.7	29		
350.	31	7,600	-18.4	56	30	7,396	-26.5	30	30	7,541	-20.1	29	30	7,563	-20.0	29		
300.	31	8,532	-25.5	29	30	8,353	-32.6	30	30	8,517	-27.0	29	30	8,538	-27.5	29		
250.	30	9,679	-33.9	29	30	9,422	-40.4	30	30	9,609	-35.4	29	30	9,628	-35.9	29		
200.	30	10,929	-44.2	28	30	10,644	-47.9	30	30	10,853	-44.7	28	30	10,889	-45.5	28		
175.	28	12,386	-56.6	27	28	12,098	-50.5	29	28	12,312	-54.2	27	28	12,321	-55.4	27		
150.	28	13,216	-63.5	25	28	12,984	-51.0	29	28	13,161	-57.7	27	28	13,164	-59.2	27		
125.	23	14,150	-69.1	20	20	13,965	-51.5	28	28	14,122	-60.7	25	25	14,117	-62.6	25		
100.	16	15,240	-70.6	16	15	15,145	-52.1	23	23	15,235	-62.6	23	23	15,233	-64.2	23		
80.									13	16,584	-62.9	15	16,600	-64.2	15	17,988	-62.7	10

¹ Data not yet received.

² Insufficient 0400 observations during July.

*Temperature and relative humidity data for this level are not available or are available only for certain days. See note entitled "Change in Summarization of Radiosonde Data," p. 6, in the January 1946 issue of the **MONTHLY WEATHER REVIEW**.

NOTE.—All observations scheduled between 0300 and 0500 G. C. T., except at Mazatlán and Merida, where they are taken near 0200 G. C. T.

"Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces

of some observations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below -20° C .

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, *MONTHLY WEATHER REVIEW*, December 1944.

None of the means included in these tables are based on less than 15 observations at the surface or 5 observations at a standard pressure level.

LATE REPORT FOR SWAN ISLAND, WEST INDIES

TABLE 1.—Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during June 1948

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Swan Island, W. I. (1,013.7 mb.)				Standard pressure surface (mb.)	Swan Island, W. I. (1,013.7 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity		Number of observations	Dynamic height	Temperature	Relative humidity
Surface.....	30	10	26.9	82	500.....	27	5,878	-7.9	55
1,000.....	36	130	26.0	82	450.....	26	6,098	-12.4	46
950.....	30	587	22.6	82	400.....	26	7,578	-17.9	43
900.....	30	1,051	19.7	78	350.....	26	8,506	-25.0
850.....	30	1,543	17.1	70	300.....	26	9,667	-33.4
800.....	30	2,058	14.6	59	250.....	26	10,919	-43.5
750.....	30	2,605	11.8	54	200.....	26	12,380	-55.5
700.....	30	3,176	8.4	52	175.....	25	13,221	-62.2
650.....	30	3,786	4.8	53	150.....	20	14,165	-68.9
600.....	28	4,431	0.9	53	125.....	9	15,203	-74.3
550.....	28	5,127	-8.4	55					

TABLE 2.—Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during July 1946. Directions given in degrees from north ($N=360^\circ$, $E=90^\circ$, $S=180^\circ$, $W=270^\circ$). Velocities in meters per second

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)		Albuquerque, N. Mex. (1,630 m.)		Atlanta, Ga. (299 m.)		Billings, Mont. (1,093 m.)		Bismarck, N. Dak. (512 m.)		Boise, Idaho (868 m.)		Brownsville, Tex. (7 m.)		Buffalo, N. Y. (220 m.)		Burling- ton, Vt. (100 m.)		Charles- ton, S. C. (16 m.)		Cincin- nati, Ohio (150 m.)		Denver, Colo. (1,627 m.)		El Paso, Tex. (1,198 m.)														
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity												
Surface.....	31	132	2.8	31	201	1.9	31	187	0.6	30	102	1.4	31	210	1.7	31	312	4.8	31	142	7.3	31	260	2.6	19	238	0.6	23	44	0.8	31	18	1.4	31	131	1.8			
500.....	31	134	3.2	30	167	0.8	31	153	0.5	30	244	2.0	31	320	4.9	31	154	7.1	31	264	4.3	31	264	2.3	28	250	8.1	23	350	0.6	31	138	2.9						
1,000.....	31	130	2.9	29	176	0.9	30	109	1.4	31	235	3.2	31	320	3.3	31	160	5.3	30	270	5.2	16	277	6.7	26	284	2.3	23	330	2.1	31	135	2.9						
1,500.....	27	130	2.8	31	204	2.0	27	232	0.4	30	161	1.4	31	241	3.5	31	313	1.2	28	148	3.6	30	271	5.9	16	252	8.3	22	285	2.8	26	330	2.0	31	30	1.5	31	135	2.9
2,000.....	27	128	2.5	31	191	2.1	25	256	1.0	30	208	2.3	31	258	4.3	31	225	2.0	28	142	3.1	24	275	6.4	15	286	9.6	20	292	3.6	16	321	2.3	31	27	1.1	31	126	2.8
2,500.....	24	101	1.8	31	171	1.7	24	273	1.3	30	239	4.0	31	231	2.7	30	123	2.3	20	200	6.0	14	290	10.1	18	292	3.4	15	318	3.2	31	44	0.7	31	119	2.7			
3,000.....	22	127	1.4	30	133	0.9	22	239	1.4	30	255	8.5	28	233	9.1	31	228	7.8	24	135	1.4	16	289	8.3	12	291	11.1	16	324	1.6	29	298	2.2	29	100	2.5			
4,000.....	20	358	2.9	26	192	0.9	14	265	1.1	27	259	12.0	25	223	11.9	22	214	0.4	18	295	8.0	—	—	—	11	310	1.2	23	270	4.9	25	115	2.0						
5,000.....	17	26	3.6	24	165	0.9	12	303	3.0	25	266	13.8	22	233	13.9	20	18	8.2	99	0.6	12	294	11.8	—	—	—	23	271	6.1	20	151	1.5							
6,000.....	14	350	2.0	21	169	1.0	—	—	—	19	254	18.1	20	272	17.6	25	230	13.6	20	115	0.9	—	—	—	13	265	8.5	13	140	2.0									
8,000.....	11	330	1.0	18	199	4.0	—	—	—	12	256	19.9	12	274	17.8	17	281	14.0	18	129	1.5	—	—	—	11	255	9.9	—	—	—									
10,000.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
12,000.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
14,000.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
Surface.....	Ely, Nev. (1,910 m.)	Grand Junc- tion, Colo. (1,475 m.)	Greensboro, N. C. (271 m.)	Havre, Mont. (767 m.)	Jackson- ville, Fla. (16 m.)	Joliet, Ill. (178 m.)	Las Vegas, Nev. (573 m.)	Little Rock, Ark. (88 m.)	Medford, Oreg. (416 m.)	Miami, Fla. (12 m.)	Mobile, Ala. (66 m.)	Nashville, Tenn. (194 m.)	New York, N. Y. (15 m.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
500.....	31	198	4.7	31	272	3.0	29	85	0.5	30	283	1.3	30	124	1.3	31	174	0.7	31	207	2.9	30	119	1.3	31	318	2.7	31	150	2.8	29	284	1.2	31	39	0.4	30	163	3.6
1,000.....	—	—	—	29	91	0.5	30	206	2.0	31	131	0.3	30	120	1.2	31	314	2.8	31	165	4.2	29	224	2.4	31	6	0.3	30	204	3.1	—	—	—	—	—	—			
1,500.....	—	—	—	29	123	0.6	30	280	1.9	29	231	3.1	31	278	0.5	31	203	4.5	30	67	0.3	30	305	3.0	31	177	3.2	26	253	2.9	30	314	0.9	27	296	3.3			
2,000.....	31	200	4.6	31	279	2.9	27	320	1.6	30	245	3.2	29	244	4.1	30	291	2.7	31	183	5.2	28	247	2.6	30	120	1.2	31	193	2.3	25	271	3.3	30	1	0.8	26	281	3.5
2,500.....	31	204	4.9	31	288	2.2	24	322	3.1	29	244	4.7	23	257	4.2	28	304	3.9	31	185	5.0	23	359	2.9	28	212	2.6	28	205	1.3	19	279	3.8	25	2	0.7	24	293	4.4
3,000.....	31	203	4.6	31	259	2.2	23	308	3.8	26	249	6.8	21	258	3.5	26	302	5.1	31	187	5.0	20	18	3.3	28	213	4.0	14	289	3.0	25	342	1.1	21	259	5.1			
4,000.....	29	207	4.8	31	239	3.4	20	313	4.1	21	255	10.3	17	240	4.0	22	297	6.0	29	203	4.8	14	203	4.5	27	223	6.9	25	159	1.8	—	—	—	17	336	1.2	23	293	6.8
5,000.....	21	221	6.0	31	232	4.3	16	321	3.7	17	262	12.3	16	232	3.1	19	302	7.0	26	213	5.7	10	35	2.0	24	224	7.6	21	169	2.4	—	—	—	14	327	2.9	11	307	8.2
6,000.....	17	215	5.7	28	223	4.3	16	324	4.4	12	258	17.3	11	246	4.1	15	301	9.2	23	206	6.1	—	—	—	22	226	9.6	17	174	2.5	—	—	—	12	319	3.3	—	—	—
8,000.....	10	222	6.5	19	232	6.5	—	—	—	—	—	—	—	—	—	—	—	—	19	218	14.2	—	—	—	13	240	14.9	—	—	—	10	318	5.2	—	—	—			
10,000.....	—	—	—	12	235	7.7	—	—	—	—	—	—	—	—	—	—	—	—	13	217	14.5	—	—	—	10	246	17.2	—	—	—	—	—	—	—	—	—			
12,000.....	—	—	—	12	224	19.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14,000.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			

TABLE 3.—Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during July 1946

Section	Surface to 2,500 meters (m. s. l.)				2,501 to 5,000 meters (m. s. l.)				Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	
Central 8	28.6	SW.	1,214	23	Dodge City, Kans.	30.0	W.	4,300	25	Indianapolis, Ind.	60.0	WNW.	14,336
East-Central 1	24.4	S.	1,429	11	Laredo, Tex.	25.0	SSW.	3,812	26	Caribou, Maine	90.2	WSW.	14,232
Southeast 2	22.6	WSW.	1,903	13	Amarillo, Tex.	25.0	SSW.	3,050	23	Hatteras, N. C.	60.0	W.	13,250
North-Central 4	35.3	NNW.	1,788	11	Ellensburg, Wash.	25.0	SSW.	2,756	31	Charleston, S. C.	35.6	ENE.	12,779
Central 8	28.6	SW.	1,214	23	Dodge City, Kans.	30.0	W.	4,300	25	Caribou, Maine	90.2	WSW.	14,232
South-Central 6	26.2	S.	1,429	11	Laredo, Tex.	25.0	SSW.	3,812	26	Hatteras, N. C.	60.0	W.	13,250
Northwest 7	29.8	WNW.	945	2	Ellensburg, Wash.	25.0	SSW.	3,050	23	Charleston, S. C.	35.6	ENE.	12,779
West-Central 8	31.8	SW.	2,219	8	Elko, Nev.	41.3	WSW.	4,667	9	Cheyenne, Wyo.	52.8	SW.	13,388
Southwest 9	27.8	ESE.	1,720	1	Roswell, N. Mex.	44.1	SW.	3,204	8	Winslow, Ariz.	43.5	SSE.	13,837
Northeast 1													